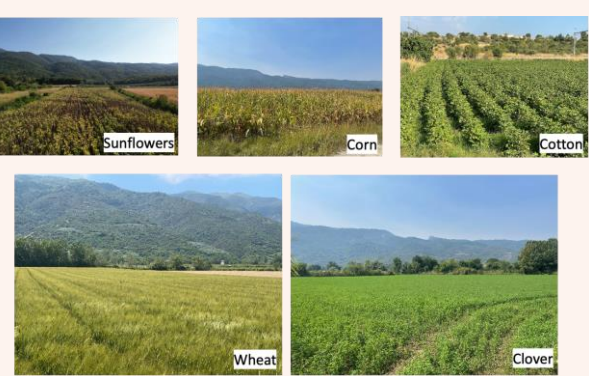


# Assessing the Impact of the 2023 Storm Daniel Flood in Pineios River Estuaries - An Analysis of Crop-Type and Inundation Mapping Using Sentinel-2 Imagery -

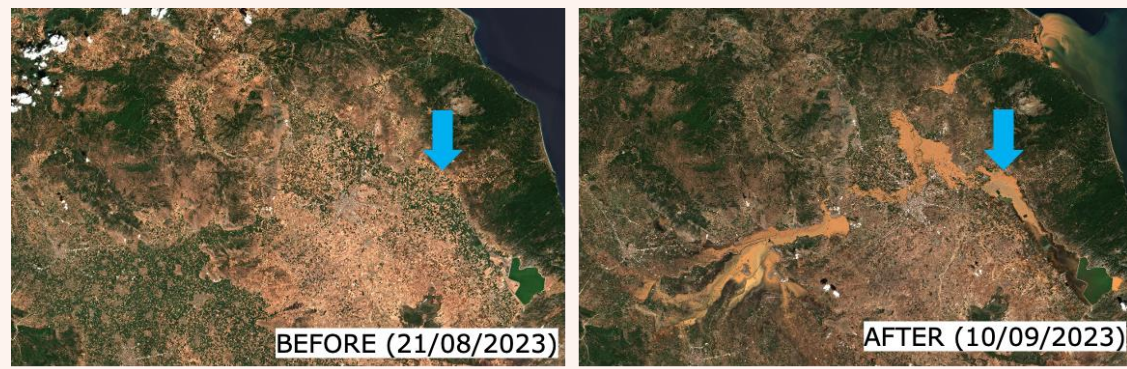
The 2023 Storm Daniel significantly affected the Pineios River estuaries, causing widespread flooding and impacting the agricultural landscape. This study aims to assess the floods' impact on the area, utilizing Sentinel-2 imagery for crop-type and inundation mapping.



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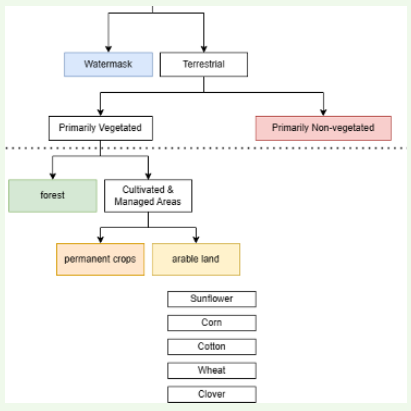
vs.



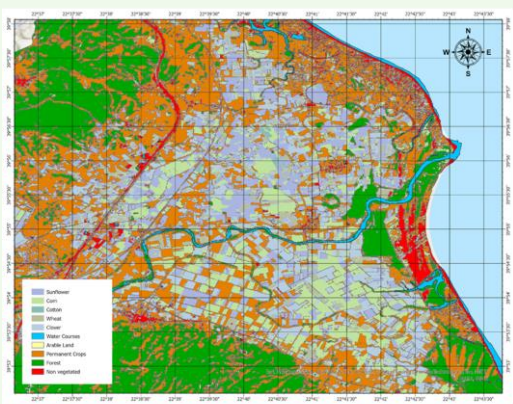
using

Variable	Sentinel-2 Formula used in this study	Landat ETM+ Formula used by Pelapou et al.	Summary statistics	
1	Blue	$B_2$	$TM_1$	
2	Green	$B_3$	$TM_2$	
3	Red	$B_4$	$TM_3$	
4	Visible and Near Infrared (VNIR)	$B_2, B_3, B_4, B_{11}$	$TM_4$	
5	Short Wave Infrared (SWIR)	$B_{11}, B_{12}$	$TM_5, TM_6$	
6	Normalized Difference NIR/Green NDVI	$\frac{B_{11} - B_3}{B_{11} + B_3}$	$TM_7 - TM_2$ $TM_5 + TM_2$	Minimum, Maximum, Median, Average, Standard deviation, Average between min and Q1, Average between max and Q3, Amplitude min to max, Amplitude Q1 to Q3, Amplitude Q2 to max
7	Normalized Difference NIR/Red Normalized Difference Vegetation Index, Calibrated NDVI - CNDVI	$\frac{B_{11} - B_4}{B_{11} + B_4}$	$TM_7 - TM_3$ $TM_5 + TM_3$	
8	Normalized Difference NIR/SWIR1	$\frac{B_{11} - B_{12}}{B_{11} + B_{12}}$	$TM_7 - TM_6$ $TM_5 + TM_6$	
9	Normalized Difference NIR/SWIR2	$\frac{B_{11} - B_{13}}{B_{11} + B_{13}}$	$TM_7 - TM_7$ $TM_5 + TM_7$	
10	Normalized Difference SWIR1/SWIR2	$\frac{B_{12} - B_{13}}{B_{12} + B_{13}}$	$TM_6 - TM_7$ $TM_6 + TM_7$	

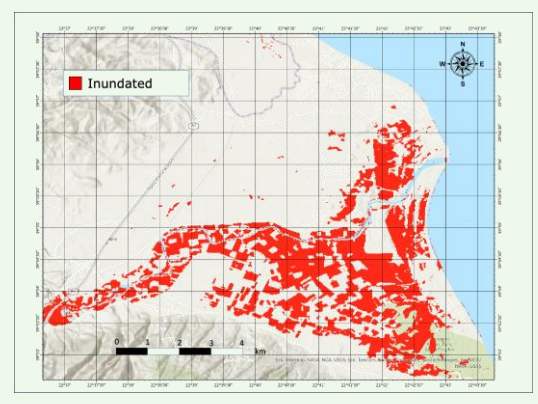
## FAO LCCS



## LC map



## Inundation map



## Post-event status

